



Order Instituting Rulemaking to Continue
Implementation and Administration, and
Consider Further Development, of California
Renewables Portfolio Standard Program.

R. 15-02-020

NOBLE AMERICAS ENERGY SOLUTIONS LLC 2016 RENEWABLES PORTFOLIO STANDARD PROCUREMENT PLAN

PUBLIC VERSION APPENDIX A REDACTED

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August 8th, 2016

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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In accordance with the Assigned Commissioner's Ruling¹ ("ACR") and the authority cited therein, Noble Americas Energy Solutions LLC, ("Noble Solutions") hereby submits its 2016 Renewables Portfolio Standard ("RPS") Procurement Plan. In fulfilling its reporting obligations, Noble Solutions responds herein to Sections 6.1 through 6.5, 6.7, 6.8, and 6.12 through 6.14 of the ACR.

Response to Items 6.1 through 6.5

6.1 Noble Solutions has been serving retail load in California since 1998, and it has consistently pursued a strategy of matching its procurement of all electric products needed to serve its customers with its customers' needs. Noble Solutions, like other Electric Service Providers ("ESPs"), provides electric products and

¹ Assigned Commissioner and Assigned Administrative Law Judge's Ruling Identifying Issues And Schedule Of Review For 2016 Renewables Portfolio Standard Procurement Plans, Rulemaking 15-02-020, May 17, 2016.

services to retail customers under contractual arrangements that are typically over terms that average anywhere between 12 to 24 months. There are sound business reasons for the relatively short-term nature of these agreements. One of these reasons is that during the term of a retail energy services contract, there is substantial credit risk, borne solely by the ESP. Moreover, Noble Solutions' customers demand these relatively short-term arrangements for reasons as varied as the customers Noble Solutions serves. Consequently, Noble Solutions meets its procurement obligations with products that match, as closely as possible, the forecasted customer loads and contract durations.

Noble Solutions' RPS procurement planning for the next 20 years involves the assumption that Noble Solutions will retain most of its current retail customers. This strategy creates supply exposure to customer volatility and may result in over-procurement at the conclusion of a compliance period. Historically RPS procurement has been weighted toward longer-term in-state RPS procurement when available, and shorter-term out-of-state imported (hourly basis, source-to-sink) RPS procurement, backfilled with Category 2 firmed-and-shaped imported RPS, with Category 3 unbundled RPS RECs to balance out the compliance period's procurement. Under expected market conditions over the next 20 years, this strategy will likely result in Noble Solutions procuring the least-expensive RPS product (Category 3 unbundled RECs) to the maximum percentage allowed for the compliance period delivered under short-term contracts; then procuring at least the minimum amount of RPS Category 1 (direct delivery) product under short- and medium-term contracts; then meeting the residual RPS compliance obligations with RPS Category 2 (firmed and shaped) procurement.

Noble Solutions constantly reviews its market positions to optimize its

portfolio of all electricity products, both from renewable and conventional sources. The amendments to the RPS policy contained in SB 2 (1X) and SB 350 have not changed Noble Solutions' basic procurement strategy. However, the new RPS program requirements are increasingly prescriptive and have added significant complexity with respect to the various kinds of RPS products and their relative percentages within the RPS portfolio. Noble Solutions is evaluating the most appropriate means of responding to these prescriptive requirements including recently enacted SB 350 which includes significant changes to the required quantities of long-term RPS contracting and the complexities they present in the context of its current procurement strategy.

Noble Solutions does not procure its RPS products on the basis of the deliverability characteristics specified (i.e., peaking, dispatchable, baseload, firm, as-available) or additional factors, such as ability and/or willingness to be curtailed, operational flexibility, etc. Rather, as noted above, Noble Solutions designs its procurement objectives around the Category specifications and RPS portfolio ratios set forth in PU Code Sec. 399.16, while seeking the least-cost solution within these constraints and engaging in longer term RPS product acquisition as commercially expedient opportunities develop.

6.2 Noble Solutions currently has three RPS supply contracts sourced from facilities still under development, therefore the quantities received under each will be contingent on the facilities successfully achieving commercial operation. One contract delivers from 2016 through 2018, the second contract delivers from 2017 through 2019 and the third from 2017 through 2018. Each of the three contracts are sourced from an individual facility. One facility has completed construction and is in precommercial operations. The other two facilities are expected to

complete construction later this year.

- 6.3 Noble Solutions has generally found that market participants develop projects and products necessary to meet the state's RPS requirements.

 Nevertheless, there are occasional issues with whether the Commission will approve of the market's response to new RPS procurement. For example, there is some degree of uncertainty when Noble Solutions purchases RPS energy that has a condition precedent related to regulatory approvals. The regulatory process is time consuming and Commission approval is not certain. In order to counter this risk, Noble Solutions attempts to make these kinds of RPS purchases far enough in advance of the close of the respective compliance period such that if a negative regulatory outcome occurs, there will likely still be time enough for Noble Solutions to procure from other sources to meet the compliance period obligation.
- 6.4 As discussed in the response to Section 6.2, Noble Solutions has entered into three RPS supply agreements that rely on new projects achieving commercial operation. The volumes to be supplied from these contracts are not significant for Compliance Period ("CP") 2, but do represent a meaningful portion of Noble Solutions' RPS expected supply for CP3.

Noble Solutions is confident the volumes under these contracts will be fully delivered. First, the facilities supplying these contracts are under Commission-approved long-term contracts with investor-owned utilities pursuant to similar contract terms. The utility contracts provide financing certainty to the construction of the project. Second, all of the facilities are solar projects eligible for the 30% ITC and therefore have an enormous financial incentive to achieve commercial operation before 2017 when current tax advantages expire. Third, the suppliers are

among the best-capitalized and most experienced developers of renewable projects, and have already brought utility-scale renewable projects to successful operation in California.

When contracting, Noble Solutions considers the risk of lower than expected generation by incorporating that risk into the commercial terms of its contracts. Other risks, such as variable generation, resource availability (e.g., biofuel supply, water, etc.), load changes, and impacts to eligible renewable energy resource projects currently under contract are handled through the procurement process as well as being addressed in the commercial terms. Noble Solutions treats compliance with the RPS program as a corporate cornerstone by being a part of the California renewable energy policy "solution."

6.5 Noble Solutions provides its quantitative response to Section 6.5 of the ACR in the attached renewable net short ("RNS") template (Appendix A).

Response to Items 6.7 and 6.8

6.7 As stated in response to 6.1 Noble Solutions does not procure its RPS products on the basis of the deliverability characteristics specified (i.e., peaking, dispatchable, baseload, firm, as-available, locational preferences) or additional factors, such as ability and/or willingness to be curtailed, operational flexibility, etc. Rather, Noble Solutions designs its bid solicitation protocol around the Category specifications and RPS portfolio ratios set forth in PU Code Sec. 399.16, while seeking the least-cost solution within these constraints and engaging in longer term RPS product acquisition as commercially expedient opportunities develop.

Noble Solutions' bid solicitation protocol, solicitation process and solicitation schedule are reflected in an informal exercise in which the commercial team responsible for RPS procurement makes and receives commercial overtures from the RPS market participants while calculating the forecast Net Short position. This is an ongoing, near-daily commercial exercise. The RPS market participants include, but are not limited to, brokers, developers, utilities, and end-use customers. The RPS market has sufficiently evolved that most parties engaged in selling RPS products have one or more preferred acceptable agreements. Therefore, Noble Solutions does not have a preferred pro forma agreement(s) to include in the 2016 RPS Procurement Plan.

At this time, Noble Solutions has no plans to sell eligible renewable energy.

Noble Solutions has no comments to offer at this time on the utility's least-cost-best-fit (LCBF) methodology nor does Noble Solutions intend to employ the renewable auction mechanism (RAM) procurement process.

6.8 Noble Solutions will consider price adjustments, potentially incorporating them into contracts for RPS-eligible projects with online dates occurring more than 24 months after the contract execution date. However, to-date, Noble Solutions has not contracted with RPS-eligible projects with online dates occurring more than 24 months after the contract execution date because of the increased development and delivery risks associated with the length of the forward timeline and the relative short-term nature of our customer contractual terms.

Noble Solutions does not have a captive customer base and references to "ratepayers" are inapplicable to its business. Thus, Noble Solutions respectfully

declines to discuss how price adjustments, as contemplated above, will maximize "ratepayer" value and minimize "ratepayer" risk.

Response to Items 6.12 through 6.14

- **6.12** There are no important changes between the 2015 and 2016 RPS Procurement Plans. Noble Solutions continues to layer-in forward RPS procurement to minimize under-procurement while managing the portfolio risk associated with customer migration.
- **6.13** Noble Solutions' redlined copy of its RPS Procurement Plan is attached hereto as Appendix B.
- **6.14** Noble Solutions contracts for the resources needed to meet its RPS procurement requirements, as described above. While Noble Solutions may contract for some or all of the output from the RPS-eligible facilities, it does not physically or contractually own and/or operate any of the resources under contract.

For PCC 1 and 2 products, the energy is delivered by the supplier pursuant to the rules applicable to the balancing authority and in accordance with Public Utility Code § 399.16(a)(1)(A) and § 399.16(a)(1)(B). Noble Solutions does not have any responsibility for the safe transmission of energy. In the case of PCC 3 procurement, there are no safety concerns as there is no energy conveyance.

The owners and/or operators of the RPS-eligible resources have the responsibility for the operation of and all safety considerations associated with the operation of their facilities under applicable laws, regulations, contracts and tariffs.

Noble Solutions has no responsibility or liability for the safe operation of the facility(ies) or for any other safety considerations associated with the operation of resources relied upon to meet its wholesale contracts requirements.

Therefore, to the best of its knowledge, there are no safety considerations for Noble Solutions to address in its 2016 RPS Plan.

DATED: August 8, 2016

Respectfully submitted,

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APPENDIX A

RENEWABLE NET SHORT TEMPLATE FOR NOBLE AMERICAS ENERGY SOLUTIONS LLC

	Bundled Retail Sales Forecast (LTPP)		7,108	7,533	7,087	21,729	6,728				
	RPS Procurement Quantity Requirement (%)		20.0%	20.0%	20.0%	20.0%	21.7%	23.3%	25.0%	23.3%	
	Gross RPS Procurement Quantity Requirement (GWh)		1,422	1,507	1,417	4,346	1,460				
	Voluntary Margin of Over-procurement		-	-	-	-	-	-	-	-	
	Net RPS Procurement Need (GWh)		1,422	1,507	1,417	4,346	1,460				
	RPS-Eligible Procurement										
	Risk-Adjusted RECs from Online Generation		1,850	1,577	1,505	4,932	1,203	1,450	1,052	3,705	
	Forecast Failure Rate for Online Generation (%)		-	1	_	-	-	-	1	-	
	Risk-Adjusted RECs from RPS Facilities in Development		-	-	-	-	-	1	-	1	
	Forecast Failure Rate for RPS Facilities in Development (%)		1	1	1	-	-	1	1	1	
	Pre-Approved Generic RECs		-	1	-	-	-	1	-	-	
	Executed REC Sales		1,850	1,577	1,505	4,932	1,203	1,450	1,052	3,705	
	Total RPS Eligible Procurement (GWh)		1,850	1,577	1,505	4,932	1,203	1,450	1,052	3,705	
	Category 0 RECs		1,840	1,029	991	3,860	-	1	-	1	
	Category 1 RECs			95	392	487	715	874	992	2,581	
	Category 2 RECs			9	121	127	381	349	09	290	
	Category 3 RECs		10	447	1	458	106	227	-	334	
	Gross RPS Position (Physical Net Short)										
	Annual Gross RPS Position (GWh)		1,850	1,577	1,505	4,932	1,203	1,450	1,052	3,705	
	Annual Gross RPS Position (%)		26%	21%	21%	23%	18%				
	Application of Bank										
/ear)	Existing Banked RECs above the PQR	140	140	268	829	829	726				
	RECs above the PQR added to Bank		-	-	-	-	-				
	Non-bankable RECs above the PQR		429	20	87	989	(257)				
	Gross Balance of RECs above the PQR	140	568	638	726	726	726				
	Planned Application of RECs above the PQR towards RPS Compliance	-	-	-	-	-	257				
	Planned Sales of RECs above the PQR	•	-	-	-	-	74				
	Net Balance of RECs above the PQR	140	568	638	726	726	395				
	Category 0 RECs	140	140	140	140	140	140				
	Category 1 RECs		429	499	586	286	255				
	Category 2 RECs		-	-	-	-	-				
	Expiring Contracts										
	RECs from Expiring RPS Contracts		1,000	1,017	1,266		333	885	947		
	Net RPS Position (Optimized Net Short)										
	Annual Net RPS Position after Bank Optimization (GWh)		1,422	1,507	1,417	4,346	1,386				
	Annual Net RPS Position after Bank Optimization (%)		20.00%	20.00%	20.00%	20.00%	20.60%				
nfid	onfidential under CPUC Confidentiality Rules, Values are shown in GWhs										

Fore

Forecast

CP2

CP1

Annual RPS Requirement

Forecast Year

4,800	50.0%	2,400	1	2,400	-	1	1	1	1	1	-		1	-	1	ı	%0	(34,243)	•	(2,400)	(36,643)	1	1	(36,643)	1	1	1	1	1	0.00%
4,800	20.0%	2,400	1	2,400	1	1	,	1	1	1	•		1	1	1	ı	%0	(31,843)		(2,400)	(34,243)	ı	1	(34,243)	1	1	1	1	1	0.00%
4,800	20.0%	2,400	ı	2,400		1	1	-	1	1	-		1	•	1	ı	%0	(29,443)	•	(2,400)	(31,843)	,	1	(31,843)	•	-	1	1	1	0.00%
4,800	50.0%	2,400		2,400	-	1	-	-	-	-	-		-	-	•	-	%0	(27,043)	•	(2,400)	(29,443)	•	-	(29,443)	-	-	•	-	-	0.00%
4,800	20.0%	2,400		2,400	-	-	-	-	-	-	-	-	-	-	-	-	%0	(24,643)	•	(2,400)	(27,043)	•	-	(27,043)	-	-	-	-	-	0.00%
4,800	20.0%	2,400		2,400	-	1	-	-	-	-	-	-	-	-	1	-	%0	(22,243)	,	(2,400)	(24,643)		-	(24,643)	-	-	,	1	1	0.00%
4,800	20.0%	2,400	1	2,400	-	1	1	1	1	ı	-	1	ı	1	ı		%0	(19,843)		(2,400)	(22,243)	ı	1	(22,243)	•	-	1	1	1	0.00%
4,800	45.0%	2,160	,	2,160	-	1	-	-	-	-	-	-	-	-	,	-	%0	(17,683)	,	(2,160)	(19,843)		-	(19,843)	-	-	,	1	1	0.00%
4,800	45.0%	2,160		2,160	-	-	-	-	-	-	-	-	-	-	-	-	%0	(15,523)	•	(2,160)	(17,683)	•	-	(17,683)	-	-	-	-	-	0.00%
4,800	45.0%	2,160		2,160	-	1	1	-	-	-	-	-	1	-	-	-	%0	(13,363)		(2,160)	(15,523)		1	(15,523)	1	-	-	1	1	0.00%
4,800	40.0%	1,920	ı	1,920	-	-	1	-	-	-	-	-	-	-	-	-	%0	(11,443)		(1,920)	(13,363)		1	(13,363)	1	-	-	1	1	0.00%
4,800	40.0%	1,920	ı	1,920	9	1	1	-	-	9	9	-	9	-	-	9	%0	(9,529)		(1,915)	(11,443)		,	(11,443)	1	-	-	25	9	0.11%
4,800	40.0%	1,920	ı	1,920	9	1	1	-	-	9	9	-	9	-	-	9	%0	(7,614)		(1,915)	(9,529)		1	(9,529)	1	-	-	1	9	0.11%
4,800	33.0%	1,584	ı	1,584	9	-	-	-	-	9	9	-	9	1	-	9	%0	(9:036)		(1,579)	(7,614)	ı	1	(7,614)	1	-	-	1	9	0.11%
4,800	33.0%	1,584	,	1,584	7	1	-	-	-	7	7	-	7	•	ı	7	%0	(4,459)	•	(1,577)	(6,036)	'	-	(6,036)	-	-	,	2	7	0.15%

Forecast For

: ::		ract Expiration	Expected Annual	:	:
Calabasas Landfill Gas-to-Energy Facility	echnology Biomethane	6/30/2013	Generation (GWn)	n) Location 19 9 l os Angeles	PCC Classification
Spring Canyon Energy, Peetz Table Wind Energy Center, Northern Colorado Wind I & II. Logan Wind. Twin Buttes. Cedar Creek				Peetz: Peetz:Logan: Logan: Lamar:	0
	Wind	12/31/2011	250	250 Weld,	
Spring Canyon Energy, Peetz Table Wind Energy Center, Northern Colorado Wind I & II, Logan Wind, Twin Buttes, Cedar Creek				Peetz; Peetz;Logan; Logan; Logan; Lamar;	0
	Wind	12/31/2011	250	250 Weld,	
Spring Canyon Energy, Peetz Table Wind Energy Center, Northern Colorado Wind I & II, Logan Wind, Twin Buttes, Cedar Creek				Peetz; Peetz;Logan; Logan; Logan; Lamar;	0
	Wind	12/31/2011	250	250 Weld,	
Spring Canyon Energy, Peetz Table Wind Energy Center, Northern Colorado Wind I & II, Logan Wind, Twin Buttes, Cedar Creek				Peetz; Peetz;Logan; Logan; Logan; Lamar;	0
	Wind	12/31/2011	250	250 Weld,	
Spring Canyon Energy, Peetz Table Wind Energy Center, Northern Colorado Wind I & II, Logan Wind, Twin Buttes, Cedar Creek	7		,	Peetz; Peetz;Logan; Logan; Logan; Lamar;	0
	Wind	71.07/1.8/71	101/	IUI / wela,	
Spring Canyon Energy, Peetz Table Wind Energy Center, Northern Colorado Wind I & II, Logan Wind, Twin Buttes, Cedar Creek, Cedar Creek II, Cedar Point, Limon, Limon II	Wind	12/31/2013	1017	Peetz; Peetz;Logan; Logan; Lamar; 1017 Weld; Weld; Lincoln; Limon	0
Angels, Murphey	Small hydroelectric	12/31/2019	1.5	Calaveras	0
El Dorado Powerhouse (Akin Powerhouse)	Small hydroelectric	N/A	10.141	10.141 El Dorado	3
Angels, Murphey	Small hydroelectric	12/31/2013	15	15 Calaveras	_
Angels, Murphey	Small hydroelectric	2702/08/6	1.5	1.5 Calaveras	_
Manzana Wind	Wind	4/8/2013	100	100 Kern	_
Joint Water Pollution Control Plant - Total Energy Facility, Puente					
Hills Gas-To-Energy Facility - Phase II	Biomethane	12/31/2014	5	5 Los Angeles	1
Red Mesa Wind	Wind	12/31/2014	212.281 Cibola	Cibola	1
Juniper Canyon, Leaning Juniper II	Wind	12/31/2016	15	15 Klickitat, Gilliam	2
Harvest Wind Project, Dokie Wind Energy Project, H.W. Hill Landfill Gas Power Plant, Wheat Field Wind Farm	Wind	12/31/2016	50	50 Klickitat, B.C., Klickitat, Gilliam	-
Harvest Wind Project, Dokie Wind Energy Project, H.W. Hill Landfill Gas Power Plant, Quality Wind Project	Wind	12/31/2013	33	Klickitat, B.C., Klickitat, Peace River District, B.C.	7
		evergreen mnth-to-			
Red Mesa Wind	Wind	mnth	15	15 Cibola	~
Joint Water Pollution Control Plant - Total Energy Facility, Puente Hills Gas-To-Energy Facility - Phase II, Palos Verdes Gas-to-Energy					
Facility - GEN 1	Biomethane	N/A	150	150 Los Angeles	က
	Wind	N/A	261.404	261.404 Cibola, Umatilla	3
Joint Water Pollution Control Plant - Total Energy Facility, Puente Hills Gas-To-Energy Facility - Phase II	Biomethane	N/A	35	35 Los Angeles	က
Geysers Power Plant - Calpine Geothermal Unit 5/6, Geysers Power Plant - Calpine Geothermal Unit 7-8	Geothermal	12/31/2013	49.98	49.98 Sonoma, Sonoma	1
Harvest Wind Project, Dokie Wind Energy Project, H.W. Hill Landfill Gas Power Plant, Quality Wind Project, Cape Scott Wind Farm	Wind	7/31/2014	55.44	55.44 Klickitat, B.C., Klickitat, Gilliam	2

Interest Wind Earny Project, H.W. Hell Landfill Mind 1231/2016 159 (Biochte, Bor, Kickkist, Peace River District, Vision Earny Project, H.W. Hell Landfill Mind 1231/2016 159 (Biochte, Bor, Kickkist, Peace River District, Annual Canada Mark & Elegaty Center, Alla Wind Stemp Canada Mark & Elegaty Center, Alla Wind Family Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Elegaty Family Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Elegaty Family Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Elegaty Family Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Elegaty Family Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Elegaty Family Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Elegaty Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Peace, H.W. Hell Landfill Reven Referance Canada Mark Elegaty Peace, H.W. Hell Landfill Reven Referance Canada Ward Elegaty Peace, H.W. Hell Landfill Reven Referance Canada Ward Elegaty Peace, H.W. Hell Landfill Reven Peace, Seat Word Elegaty Peace, H.W. Hell Landfill Reven Referance Canada Ward Elegaty Peace, H.W. Hell Landfill Reven Referance Canada Ward Elegaty Peace, H.W. Hell Landfill Reven Reven Peace, Elegaty Peace, H.W. Hell Landfill Reven	Calpine Geothermal Unit 5/6, Calpine Geothermal Unit 7-8, Calpine Geothermal Unit 11, AES Delano, Inc., Otay Landfill Gas LLC (Otay I), Otay Landfill Gas LLC (Otay II), San Marcos Energy LLC, Olivenhain Municipal Water District, MM San Diego Energy (Miraman), Otay Landfill Gas LLC (Otay III), Blue Lake Power LLC, Ocotillo Express LLC, Otay Landfill Gas LLC (Otay V), Otay Landfill Gas LLC (Otay V)	Geothermal, Geotherm	12/31/2015	200 <u>Die</u> 200 <u>Die</u> 200 <u>Die</u>	Sonoma, Sonoma, Delano, San Diego, San Diego, San Diego, San Diego, San Diego, Humboldt, Imperial, San Diego, San Diego	_
Wind 331/2014 50 Wind 1231/2015 150 Biomethane: Landfill gas 1231/2016 150 Biomethane: Landfill gas 1231/2016 2.5 Wind 1231/2018 2.5 Wind N/A 1231/2018 100 wind N/A 3/1/2016 50 Wind 1231/2017 30 Wind 1231/2016 150 Wind 1231/2016 150 Wind 1231/2016 150 Wind 1231/2016 150 Wind 1231/2016 10 Biomass 1231/2016 10 Biomass 1231/2016 77.26	Project, H.W. Hill Landfill	Wind	12/31/2015		ckitat, B.C., Klickitat, Peace River District,	2
Wind 12/31/2015 150 Bromethane: Landfill gas 12/31/2016 49.9 Bromethane: Landfill gas 12/31/2016 2.5 dfill Wind 12/31/2018 1.5 Wind N/A 12/31/2018 1.0 Wind N/A 12/31/2014 1.0 Wind N/A 12/31/2017 30 Wind 12/31/2017 30 Wind 12/31/2017 30 Wind 12/31/2015 20 Wind 12/31/2015 30 Wind 12/31/2015 30 Wind 12/31/2015 30 Wind 12/31/2015 150 Wind 12/31/2016 150 Wind 12/31/2016 150 Wind 4/15/2016 30 Biomass 12/31/2016 77.265 Wind 4/15/2016 77.265 Wind 4/15/2016 77.265 Wind 4/15/2016 77.265 Win		Wind	3/31/2014		natilla	2
Biomethane: Landfill gas 12/31/2016 49.9 Biomethane 12/31/2016 2.5 Wind 12/31/2018 1.5 Wind 12/31/2018 1.5 Wind 12/31/2018 2.0 Wind 12/31/2018 2.0 Wind 12/31/2017 2.0 Wind 12/31/2017 3.0 Wind 12/31/2017 3.0 Wind 12/31/2017 3.0 Wind 12/31/2017 3.0 Wind 12/31/2018 3.1 Wind 12/31/2016 1.5 W		Wind	12/31/2015	150 Ke	ın, Kern	
Biomethane 12/31/2016 2.5 Wind		Biomethane: Landfill gas	12/31/2016	49.9 Lo	s Angeles	1
Wind	Joint Water Pollution Control Plant - Total Energy Facility, Puente Hills Gas-To-Energy Facility - Phase II	Biomethane	12/31/2016	2.5 Lo	s Angeles	-
Small hydroelectric 12/31/2016 15 Wind evergreen mith-to-muth to-muth to		Wind	12/31/2013	KIII 1 B.C	ckitat, B.C., Klickitat, Peace River District,	т
Wind evergreen muth-to-muth 12/31/2018 100 Wind muth 12/31/2014 10 wind 12/31/2014 10 Wind 12/31/2015 50 Wind 12/31/2017 30 Wind 12/31/2017 30 Wind 12/31/2015 30 Wind 12/31/2015 30 Wind 12/31/2015 30 Wind 12/31/2015 15 Wind 12/31/2015 15 Wind 12/31/2016 15 Wind 4/15/2016 20 Wind 12/31/2016 20 Wind 4/15/2016 20 Wind 4/15/2016 20 Wind 4/15/2016 20 Wind 4/15/2016 20 Wind <td></td> <td>Small hydroelectric</td> <td>12/31/2015</td> <td></td> <td>llaveras</td> <td>_</td>		Small hydroelectric	12/31/2015		llaveras	_
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Wind 12/31/2018 56 Wind 12/31/2014 10 Wind N/A 3/1/2015 75 Wind 12/31/2017 30 Wind 12/31/2017 30 Wind 4/15/2015 20 Wind 4/15/2015 20 Wind 4/15/2015 15 Wind 12/31/2015 15 Wind 12/31/2016 15 Wind 12/31/2016 15 Wind 12/31/2016 15 Wind 4/15/2016 30			evergreen mnth-to- mnth	20 Cik	oola	2
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Coso Finance Partners (Navy I), Coso Power Developers, Coso Energy Developers, Terra-Gen Dixie Valley, LLC, Alta Wind Units I thru V and VIII, Mammoth G2, Puente Hills Landfill Gas-to-Energy Facility, Mountain View I & II, Mustang Hills, LLC, Pinyon Pines Wind I & II, Cameron Ridge, Windstream 6039, Windstream 6040, Zond Systems Inc. (VG #3)	Geothermal. Wind	12/31/2018	Little Lake, Fallon, Kem, Mono, L.A., Riverside,
Golden Hills Wind	Wind	12/31/2016	100 Alameda

APPENDIX B

REDLINED COPY OF NOBLE AMERICAS ENERGY SOLUTIONS LLC 2016 RPS PROCUREMENT PLAN

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue Implementation and Administration, and Consider Further Development, of California Renewables Portfolio Standard Program.

R. 15-02-020

NOBLE AMERICAS ENERGY SOLUTIONS LLC 20152016 RENEWABLES PORTFOLIO STANDARD PROCUREMENT PLAN

Greg Bass Noble Americas Energy Solutions LLC 401 West "A" Street, Suite 500 San Diego, CA 92101 (619) 684-8199 gbass@noblesolutions.com

July 31, 2015 August 8th, 2016

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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue Implementation and Administration, and Consider Further Development, of California Renewables Portfolio Standard Program.

R. 15-02-020

NOBLE AMERICAS ENERGY SOLUTIONS LLC 20152016 RENEWABLES PORTFOLIO STANDARD PROCUREMENT PLAN

In accordance with the Assigned Commissioner's Ruling¹ ("ACR") and the authority cited therein, Noble Americas Energy Solutions LLC, ("Noble Solutions") hereby submits its 20152016 Renewables Portfolio Standard ("RPS") Procurement Plan. In fulfilling its reporting obligations, Noble Solutions responds herein to Sections 6.1 through 6.5, 6.7, 6.128, and 6.12 through 6.14 of the ACR.

Additionally, Noble Solutions addresses Sections 6.13 and 6.15.

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¹ Assigned Commissioner's Revised Commissioner and Assigned Administrative Law Judge's Ruling Identifying Issues And Schedule Of Review For 2015 2016 Renewables Portfolio Standard Procurement Plans, Rulemaking 15-02-020, May 28, 201517, 2016.

Response to Items 6.1 through 6.65

6.1 Provide a written description assessing annual and multi-year portfolio supplies and demand in relation to RPS requirements, the RPS program, and the RPS program's overall goals to determine the retail seller's optimal mix of eligible renewable energy resources.

The assessment should consider, at a minimum, a 20 year time frame with a detailed 10 year planning horizon that takes into account both portfolio supplies and demand. This written description must include the retail seller's need for RPS resources with specific deliverability characteristics, such as, peaking, dispatchable, baseload, firm, and as-available capacity as well as any additional factors, such as ability and/or willingness to be curtailed, operational flexibility, etc.

This written description must also explain how the proposed renewable energy portfolio will align with expected load curves and durations, as well as how it optimizes cost, value and risk for the ratepayer. Where applicable, the assessment should also identify and incorporate impacts of overall energy portfolio and system requirements (not just RPS portfolio requirements), recent legislation, other Commission proceedings (e.g. R.13-12-010, the long-term procurement plans proceeding), other agencies requirements, and other policies or issues that would impact RPS demand and procurement.

The written description should also explicitly and specifically address, both qualitatively and quantitatively, to the extent possible, how the buyer intends to increase the diversity in its portfolio overall, to address issues of grid integration, potential for overgeneration, and ratepayer value.

Additionally, the assessment should describe and incorporate RPS lessons learned over the past year, including RPS trends and potential future trends. Lastly, it must also explain how the quantitative analysis provided in response to section 6.5 supports the assessment.

has consistently pursued a strategy of matching its procurement of all electric products needed to serve its customers with its customers' needs. Noble Solutions, like other Electric Service Providers ("ESPs"), provides electric products and services to retail customers under contractual arrangements that are typically over terms that average anywhere between 12 to 24 months. There are sound business reasons for the relatively short-term nature of these agreements. One of these reasons is that during the term of a retail energy services contract, there is substantial credit risk, borne solely by the ESP. Moreover, the veryNoble Solutions' customers Noble Solutions serves demand these relatively short-term arrangements for reasons as varied as the customers Noble Solutions serves. Consequently, Noble Solutions meets its procurement obligations with products that match, as closely as possible, the forecasted customer loads and contract durations. However, to the extent that certain customers are willing to step

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forward and contract for RPS products that extend past the typical contract term and as longer term RPS opportunities develop, Noble Solutions has been engaging in longer term RPS contracts with RPS developers.

Noble Solutions' RPS procurement planning for the next 20 years involves the assumption that Noble Solutions will retain most of its current retail customers. Therefore, the optimal mix of RPS procurement will weigh This strategy creates supply exposure to customer volatility and may result in over- procurement at the conclusion of a compliance period. Historically RPS procurement has been weighted toward longer-term in-state RPS procurement when available, and shorter-term out-of-state imported (hourly basis, source-to-sink) RPS procurement, backfilled with Category 2 firmed-and-shaped imported RPS, with Category 3 unbundled RPS RECs to balance out the compliance period's procurement. Under expected market conditions over the next 20 years, this strategy will likely result in Noble Solutions procuring the least-expensive RPS product (Category 3 unbundled RECs) to the maximum percentage allowed for the compliance period delivered under short-term contracts; then procuring at least the minimum amount of RPS Category 1 (direct delivery) product under short- and medium-term contracts; then meeting the residual RPS compliance obligations with RPS Category 2 (firmed and shaped) procurement.

Noble Solutions constantly reviews its market positions to optimize its portfolio of all electricity products, both from renewable and conventional sources. The amendments to the RPS policy contained in SB 2 (1X) and SB 350 have not changed Noble Solutions' basic procurement strategy. The However, the new RPS program has requirements are increasingly prescriptive and have added significant complexity and detailed requirements with respect to the various kinds of RPS

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products and their relative percentages within the RPS portfolio. <u>Noble Solutions</u> is evaluating the most appropriate means of responding to these prescriptive requirements including recently enacted SB 350 which includes significant changes to the required quantities of long-term RPS contracting and the complexities they present in the context of its current procurement strategy.

Noble Solutions does not procure its RPS products on the basis of the deliverability characteristics specified (i.e., peaking, dispatchable, baseload, firm, as-available) or additional factors, such as ability and/or willingness to be curtailed, operational flexibility, etc. Rather, as noted above, Noble Solutions designs its procurement objectives around the Category specifications and RPS portfolio ratios set forth in PU Code Sec. 399.16, while seeking the least-cost solution within these constraints and engaging in longer term RPS product acquisition as commercially expedient opportunities develop.

The ACR requires that RPS Procurement Plans address "both a 33 percent by 2020 requirement and a 40 percent by 2024 requirement." As noted above, Noble Solutions' planning and procurement processes have not significantly changed as a result of new RPS requirements established by SB 2 (1X). Furthermore, Noble Solutions' planning and procurement processes will not vary regardless of whether a 33 percent by 2020 or 40 percent by 2024 requirement is in place.

6.2 Provide a written status update on the development schedule of all eligible renewable energy resources currently under contract but not yet delivering generation. This written status update should differentiate status updates based on whether projects are pre-construction, in construction, or post-construction. The status updates provided in the written description must be reflected in the quantitative analysis provided in response to section 6.5, below. Given this analysis, discuss how the status updates will impact the retail seller's net short and its procurement decisions for the next two years and on a 10-year planning horizon.

Noble Solutions currently has two 6.2 Noble Solutions currently has three

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² ACR, p. 5.

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RPS supply contracts sourced from facilities still under development, therefore the quantities received under each will be contingent on the facilities successfully achieving commercial operation. One contract delivers from late-2016 through 2019 and 2018, the second contract delivers from 2017 through 2018. There 2019 and the third from 2017 through 2018. Each of the three contracts are sourced from an individual facility. One facility has completed construction and is in precommercial operations. The other two facilities supplying the first contract and one facility supplying the second contract. All three facilities are expected to close financing by the end of the third quarter of 2015 before commencing construction. Noble Solutions' status update will not significantly vary if a 33 percent by 2020 or 40 percent by 2024 requirement is in place. complete construction later this year.

delay RPS compliance, including, but not limited to inadequate transmission capacity, delayed substation construction, permitting, financing, unanticipated curtailment, market participants develop projects and products necessary to meet the relationship, if any, to project development delays, reduced generation, and compliance delays. Describe state's RPS requirements. Nevertheless, there are occasional issues with whether the steps taken to account for and minimize these potential compliance delays. The potential compliance delays included in the written description must be reflected in the quantitative analysis provided in Commission will approve of the market's response to section 6.5. Given this analysis, discuss how the potential compliance delays will impact the retail seller's new RPS net short and its procurement-decisions.

There. For example, there is some degree of regulatory uncertainty when Noble Solutions purchases RPS energy from the investor-owned utilities. that has a condition precedent related to regulatory approvals. The regulatory process is time consuming and Commission approval is not certain. In order to counter this risk, Noble Solutions attempts to make these kinds of RPS purchases far enough in advance of the close of the respective compliance period such that if a negative

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regulatory outcome occurs, there will likely still be time enough for Noble Solutions to procure from other sources to meet the compliance period obligation. These issues could be compounded if a 40 percent by 2024 requirement is implemented, as additional procurement would need to occur. Nevertheless, Noble Solutions anticipates that even under a 40 percent by 2024 RPS program, it will undertake procurement to ensure sufficient time to meet procurement obligations.

6.4 Provide a written assessment of the risk in the RPS portfolio in relation to RPS compliance requirements. Risk assessment should describe risk factors such as those described above regarding compliance delays, as well as, but not limited to, the following: lower than expected generation, variable generation, resource availability (e.g., biofuel supply, water, etc.), load changes, and impacts to eligible renewable energy resource projects currently under contract. The risk assessment provided in the written description must be reflected in the quantitative analysis provided in response to section 6.5. Given this analysis, discuss how the risk assessment will impact the retail seller's net short and its procurement decisions. The written assessment must explain how quantitative analysis provided in response to section 6.5 supports this response.

6.4 As discussed in the response to Section 6.2, Noble Solutions has entered intotwothree RPS supply agreements that rely on new projects achieving commercial
operation. The volumes to be supplied from these contracts are not significant for
Compliance Period ("CP") 2, but do represent a meaningful portion of Noble
Solutions' RPS expected supply for CP3.

Noble Solutions is confident the volumes under these contracts will be fully delivered. First, the facilities supplying these contracts are under Commission-approved long-term contracts with investor-owned utilities following the pursuant to similar contract terms with Noble Solutions, which provides. The utility contracts provide financing certainty to construct the construction of the project. Second, all of the facilities are solar projects eligible for the 30% ITC and therefore have an enormous financial incentive to achieve commercial operation before 2017-when current tax advantages expire. Third, both of the suppliers are among the best-capitalized and most experienced developers of renewable projects, and

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have already brought utility-scale renewable projects to successful operation in California.

When contracting, Noble Solutions considers the risk of lower than expected generation by incorporating that risk into the commercial terms of its contracts. Other risks, such as variable generation, resource availability (e.g., biofuel supply, water, etc.), load changes, and impacts to eligible renewable energy resource projects currently under contract are handled through the procurement process as well as being addressed in the commercial terms. Noble Solutions takestreats compliance with the RPS program as a corporate cornerstone by being a part of the California renewable energy policy "solution." Though a 40 percent by 2024 requirement will likely exacerbate these risks in comparison to a 33 percent by 2020 requirement, Noble Solutions does not anticipate a higher procurement target serving as an obstacle to complying with the RPS program.

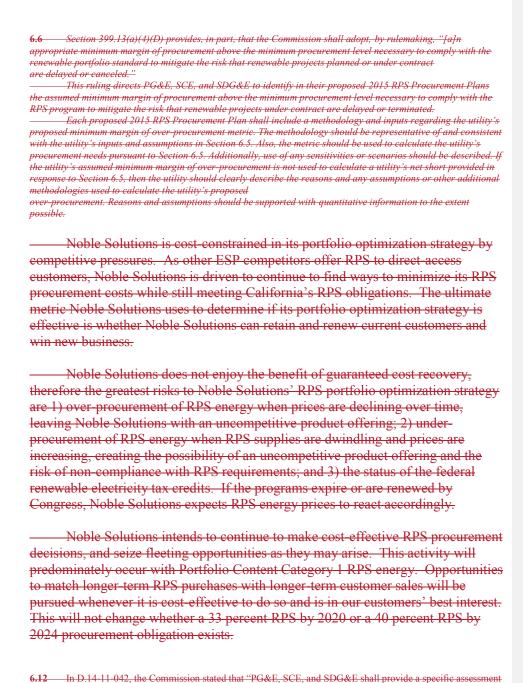
6.5 In addition to the written descriptive responses to Sections 6.1 through 6.1, provide quantitative data, methodologies, and calculations relied upon to assess the retail seller's RPS portfolio needs and RPS procurement net short. This quantitative analysis must take into account, where appropriate, the quantitative discussion requirement by Sections 6.1-6.4, above. Any RPS eligible procurement that has or will occur outside of the RPS program should also be included. As stated above, the portfolio assessment should be for a minimum of 20 years in the future. The responses must be clear regarding the quantitative progress made towards RPS requirements and the specific risks to the electrical corporation's RPS procurement portfolio. Risks may include, but are not limited to, project development, regulatory, and market risks. The quantitative response must be provided in an Excel spreadsheet based on the most recently directed renewable net short methodology.

6.5 Noble Solutions provides its quantitative response to Section 6.5 of the ACR in the attached renewable net short ("RNS") template (Appendix A). Under a 40% RPS by the year 2024 scenario the current RNS template results will remain the same, but with higher RPS targets and therefore larger RNS showings.

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of the offers and contracted projects in Imperial Valley region in future RPS Procurement Plans filed with the Commission pursuant to §§ 399.11 et seq. until directed otherwise."

While restating this directive here is not necessary, we do so to further support our commitment to the continued monitoring of the utilities' procurement activities in the Imperial Valley area and renewable projects' utilization of the Sunrise Powerlink Transmission Project in recognition of the Commission's commitment that Sunrise Powerlink is "used efficiently, equitably and wisely." This directive refers to the Commission's prior determinations that granted SDG&E a Certificate of Public Convenience and Necessity for the Sunrise Transmission project and directed the Commission to consider several proposals so that the renewable resources that are facilitated by Sunrise are developed on a timely basis.

The Commission's commitment to this matter was most recently reaffirmed in the decision accepting the 2014 RPS Procurement Plans.

Specifically, we direct PG&E, SCE, and SDG&E to report on the Imperial Valley results from the 2014 solicitation, any CPUC-approved RPS power purchase agreements for projects in the Imperial Valley that are under development, and any RPS projects in the Imperial Valley that have recently achieved commercial operation.

It should be noted that the language of paragraph 6.12 only instructs "PG&E, SCE, and SDG&E" to provide the requested information. Accordingly, Noble Solutions does not provide a response to 6.12.

6.13 • A statement identifying and summarizing the important changes between the 2014 and 2015 RPS Procurement Plans must be included. This summary should not be a reprint of the two plans with strike-out and underlined inserts. In addition to identifying and summarizing the important changes, the plan should also include an explanation and justification of reasonableness for each important change from 2014 to 2015.

Response to Items 6.7 and 6.8

products on the basis of the deliverability characteristics specified (i.e., peaking, dispatchable, baseload, firm, as-available, locational preferences) or additional factors, such as ability and/or willingness to be curtailed, operational flexibility, etc. Rather, Noble Solutions designs its bid solicitation protocol around the Category specifications and RPS portfolio ratios set forth in PU Code Sec. 399.16, while seeking the least-cost solution within these constraints and engaging in longer term RPS product acquisition as commercially expedient opportunities develop.

Noble Solutions' bid solicitation protocol, solicitation process and solicitation schedule are reflected in an informal exercise in which the commercial team responsible for RPS procurement makes and receives commercial overtures

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from the RPS market participants while calculating the forecast Net Short position. This is an ongoing, near-daily commercial exercise. The RPS market participants include, but are not limited to, brokers, developers, utilities, and end-use customers. The RPS market has sufficiently evolved that most parties engaged in selling RPS products have one or more preferred acceptable agreements. Therefore, Noble Solutions does not have a preferred pro forma agreement(s) to include in the 2016 RPS Procurement Plan.

At this time, Noble Solutions has no plans to sell eligible renewable energy.

Noble Solutions has no comments to offer at this time on the utility's least-cost-best-fit (LCBF) methodology nor does Noble Solutions intend to employ the renewable auction mechanism (RAM) procurement process.

6.8 Noble Solutions will consider price adjustments, potentially incorporating them into contracts for RPS-eligible projects with online dates occurring more than 24 months after the contract execution date. However, to-date, Noble Solutions has not contracted with RPS-eligible projects with online dates occurring more than 24 months after the contract execution date because of the increased development and delivery risks associated with the length of the forward timeline and the relative short-term nature of our customer contractual terms.

Noble Solutions does not have a captive customer base and references to "ratepayers" are inapplicable to its business. Thus, Noble Solutions respectfully declines to discuss how price adjustments, as contemplated above, will maximize "ratepayer" value and minimize "ratepayer" risk.

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Response to Items 6.12 through 6.14

6.12 There are no important changes between the 20142015 and 20152016 RPS Procurement Plans. Noble Solutions continues to layer-in forward RPS procurement to minimize under-procurement while managing the portfolio risk associated with customer migration.

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6.14 • A version of the 2015 RPS Procurement Plan that is "redlined" to identify the changes from the 2014 plan must be included with the 2015 RPS Procurement Plans. The IOUs must provide a redlined copy for the Commission's Energy Division Staff, the ALJ, and any party who requests a copy. (This is separate from the Important Changes item above.)

<u>6.13</u> Noble Solutions' redlined copy of its RPS Procurement Plan is attached hereto as Appendix B.

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6.15 As stated in D.11-11-024, all entities filing RPS Procurement Plans must incorporate a section on safety considerations.

<u>6.14</u> Noble Solutions contracts for the resources needed to meet its RPS procurement requirements, as described above. While Noble Solutions may contract for some or all of the output from the RPS-eligible facilities, it does not physically or contractually own and/or operate any of the resources under contract.

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For PCC 1 and 2 products, the energy is delivered by the supplier pursuant to the rules applicable to the balancing authority and in accordance with Public Utility Code § 399.16(a)(1)(A) and § 399.16(a)(1)(B). Noble Solutions does not have any responsibility for the safe transmission of energy. In the case of PCC 3 procurement, there can be are no safety concerns as there is no energy conveyance.

The owners and/or operators of the RPS-eligible resources have the responsibility for the operation of and all safety considerations associated with the operation of their facilities under the applicable laws-, regulations, contracts and tariffs. Noble Solutions has no responsibility or liability for the safe operation of the facility(ies) or for any other safety considerations associated with the operation of those resources used relied upon to meet its wholesale contracts requirements.

Therefore, to the best of its knowledge, there are no safety considerations for Noble Solutions to address in its 20152016 RPS Plan.

DATED: July 31, 2015 August 8, 2016

Respectfully submitted,

/s/
Greg Bass
Noble Americas Energy Solutions LLC
401 West "A" Street, Suite 500
San Diego, CA 92101
(619) 684-8199
gbass@noblesolutions.com

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APPENDIX A RENEWABLE NET SHORT TEMPLATE FOR NOBLE AMERICAS **ENERGY SOLUTIONS LLC** Formatted: Left, Line spacing: single, Tab stops: 1.53", Left Formatted: Font: Not Bold

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APPENDIX B

REDLINED COPY OF NOBLE AMERICAS ENERGY SOLUTIONS LLC 20152016 RPS PROCUREMENT PLAN

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VERIFICATION

This Verification is prepared in conformance with the requirements set forth in "SCOPING MEMO AND RULING OF ASSIGNED COMMISSIONER," May 22, 2015 in R. 15-02-020.

I am an employee of Noble Americas Energy Solutions LLC, and I am authorized to make this verification on its behalf. The statements in the paper styled "NOBLE AMERICAS ENERGY SOLUTIONS LLC 20152016 RENEWABLES PORTFOLIO STANDARD PROCUREMENT PLAN," dated July 31st, 2015 August 8, 2016, are true and correct of my own knowledge, except as to matters therein stated on information and belief, and as to those matters, I believe them to be true.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 31st8th day of July, 2015 August, 2016 at San Diego, California.

Greg Bas Directo

Noble Americas Energy Solutions LLC

VERIFICATION

This Verification is prepared in conformance with the requirements set forth in "SCOPING MEMO AND RULING OF ASSIGNED COMMISSIONER," May 22, 2015 in R. 15-02-020.

I am an employee of Noble Americas Energy Solutions LLC, and I am authorized to make this verification on its behalf. The statements in the paper styled "NOBLE AMERICAS ENERGY SOLUTIONS LLC 2016 RENEWABLES PORTFOLIO STANDARD PROCUREMENT PLAN," dated August 8, 2016, are true and correct of my own knowledge, except as to matters therein stated on information and belief, and as to those matters, I believe them to be true.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 8th day of August, 2016 at San Diego, California.

Director
Noble Americas Energy Solutions LLC